GUIDE SPECIFICATION FOR REZI-WELD™ 3/2: EPOXY GROUT-PATCH KIT

SECTION 03 63 00

EPOXY GROUTING

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) format. The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: REZI-WELD 3/2 grout-patch kit is a moisture-insensitive, two-component epoxy kit for grouting, sealing base plates, and patching concrete. Part A, the specially formulated epoxy resin and selected, graded aggregates, are premixed and packaged in a five-gallon container. A drop-in tray is provided to hold the separately packaged Part B, or activator. This handy, unitized packaging provides its own mixing vessel. Just open the pail, remove the tray, add the activator to the premixed epoxy-aggregate compound and it's ready to use. It's that easy.

REZI-WELD 3/2 grout-patch offers a flowable viscosity for application versatility. It provides a 50 to 60 minute work life and offers high compressive strength. REZI-WELD 3/2 grout-patch resists many industrial chemicals, alkalis, oils, gasoline, most solvents and some acids.

REZI-WELD 3/2 grout-patch kit is ideal for a variety of construction grouting and patching repair projects. As an epoxy grout, it can be readily poured under base plates or used for anchoring bolts. When applied as a concrete patch, the patching mix serves as a brushed on primer. The use of a finishing trowel completes the patching application while the primer is still tacky.

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Application of a three-component multi-purpose epoxy grout.

1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

A. Section 03 10 00 – Concrete Forming and Accessories

B. Section 03 30 00 – Cast-in-Place Concrete.

C. Section 05 50 00 – Metal Fabrications.

1.03 REFERENCES

A. ASTM C882 - Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear.

B. ASTM D570 - Standard Test Method for Water Absorption of Plastics.

C. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics.

D. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

1.04 QUALITY ASSURANCE

A. Contractor will provide the proper equipment, manpower, and supervision at the jobsite to install the epoxy grout in compliance with the project plans and specifications.

B. Installation must be carried out by an experienced contractor with an adequate number of skilled personnel, experienced in the application of the epoxy grout.

1.05 SUBMITTALS

A. Comply with Section 01 33 00 - Submittal Procedures.

B. Submit manufacturer's product data and application instructions.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean, dry area in accordance with manufacturer's instructions.

C. Condition materials to 60-85° F (15°C-30° C) for at least 24 hours prior to mixing.

D. Keep product from freezing.

E. Protect materials during handling and application to prevent damage or contamination.

F. Mix complete units only.

G. Do not add water to the epoxy grout.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Application when surfaces and material are below 10°C (50°F) will reduce flowability and slow cure time. For optimum flow and ease of handling, placement at 10 - 32°C (50 - 90°F) is recommended.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. W. R. MEADOWS®, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

A. Performance Based Specification: Epoxy grout shall be a three component moisture-insensitive kit consisting of an epoxy resin, activator and selected graded premixed aggregates and possess the following characteristics:

1. Compressive Strength, ASTM D695: 1 day: 8,000 psi (55 MPa)
   3 days: 11,000 psi (75 MPa)
   7 days: 13,000 psi (89 MPa)
2. Flexural Strength, ASTM D790 (7 days): 4,065 psi (28.05 MPa)

3. Water Absorption, ASTM D570 (24 hours): 0.09%
4. Bond Strength, ASTM C882 (7 day bond strength to concrete): 4,034 psi (27.84 MPa).

B. Proprietary Based Specification: REZI-WELD 3/2 Epoxy Grout-Patch Kit by W. R. MEADOWS.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive epoxy grout. Notify Architect or Engineer if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

A. Mechanically abrade all concrete to a sound surface.

B. Ensure all surfaces are free of standing water and completely clean of dirt, rust, curing compounds, grease, oil, paint and unsound materials.

C. Vacuum or blow dust away with oil-free, compressed air.

D. Sandblast exposed steel surfaces and vacuum clean; if not possible, degrease the surface and use sandpaper or a wire brush to reveal continuous, bright metal.

E. Prime metal surfaces with steel primer if not grouted within 24 hours of cleaning the metal.

3.03 FORMING

A. Seal all forms to prevent leakage.

B. Coat forms with wax or cover with polyethylene to prevent grout adhesion.

C. Construct forms to allow a 50 mm (2") minimum head on the pouring side and material to rise slightly above the underside of the base on other sides.

3.03 MIXING

A. Condition all components to 60-85° F (15°C-30° C) for 24 hours prior to use.

B. Premix epoxy resin and activator separately to an even consistency prior to combining components.

C. Mechanically mix at slow speed (600-900rpm) using a drill and Jiffy Blade or drum mixer for three minutes or until completely mixed.

D. Scrape sides of the container to ensure complete blending of the components.

E. Ensure mixed product is uniform grey color with no streaks.

F. Steadily add aggregate while continuing to mix.

G. Continue mixing for 3-5 minutes upon completion of adding the aggregate.

H. Mix only the amount of epoxy that can be applied within the product's pot life.

I. Ensure mixed product is uniform grey color with no streaks.

3.04 APPLICATION

A. Pour the prepared grout into the forms from 1 or 2 sides to avoid air entrapment.

B. Maintain a liquid head to ensure complete contact with the base plate.

C. Ensure a minimum 1" (25.4 mm) minimum grout head is maintained.

D. Place enough material to allow the grout to rise slightly above the underside of the base plate.

3.05 CURING

A. Maintain an ambient temperature between 50 - 90° F (10 - 32° C) until the grout has cured completely.

END OF SECTION